



## SCREENING DECISION REPORT NIRB FILE NO.: 11MN034

AAND File No.: 5510-5-28  
DFO File No.: NU-11-0014  
EC File No.: 4703 001 014

July 8, 2011

The Honourable John Duncan  
Minister of Aboriginal Affairs and Northern Development  
Executive Offices  
10 Wellington St.  
Gatineau, QC K1A 0H4

Via email: [duncanj@parl.gc.ca](mailto:duncanj@parl.gc.ca) and [minister@inac-ainc.gc.ca](mailto:minister@inac-ainc.gc.ca)

**Re: Screening Decision for AEM's "Meliadine Gold Mine" project proposal, NIRB File No. 11MN034**

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Dear Mr. John Duncan:

As can be seen from the more detailed comments below, the Nunavut Impact Review Board (NIRB or Board) is recommending that Agnico-Eagle Mines Ltd.'s (AEM or proponent) "Meliadine Gold mine" project proposal be the subject of a public review pursuant to **Section 12.4.4(b)** of the Nunavut Land Claims Agreement (NLCA).

### LEGAL FRAMEWORK

Subsection 12.4.2 (a) of the Nunavut Land Claims Agreement (NLCA) directs the NIRB, when screening a project, to recommend a public review when in its judgement:

- (i) the project may have significant adverse effects on the ecosystem, wildlife habitat or Inuit harvesting activities,
- (ii) the project may have significant adverse socio-economic effects on northerners,
- (iii) the project will cause significant concern, or
- (iv) the project involves technological innovations for which the effects are unknown;

Pursuant to Subsection 12.4.2 (b), a review is generally not required when, in NIRB's judgement, the project is unlikely to arouse significant public concern and;

- (i) the adverse ecosystemic and socio-economic effects are not likely to be significant, or

- (ii) the project is of a type where the potential adverse effects are highly predictable and mitigable with known technology

Subsection 12.4.2 (c) instructs NIRB to give greater weight to the provisions of 12.4.2 (a) in determining whether a review is required or not.

#### PROCEDURAL HISTORY AND BACKGROUND

On May 4, 2011 the NIRB received AEM's "Meliadine Gold Mine" project proposal (the Project) directly from AEM. On May 3, 2011 the Kivalliq Inuit Association (KIA) referred the Project to the NIRB for screening pursuant to Article 12 of the Nunavut Land Claims Agreement (NLCA). On June 8, 2011 the NIRB received a positive conformity determination (Keewatin Regional Land Use Plan) from the Nunavut Planning Commission and commenced screening the Project. The NIRB has assigned this project proposal file No. 11MN034.

This project proposal was distributed to community organizations in Arviat, Whale Cove, Rankin Inlet, Chesterfield Inlet, Coral Harbour, Repulse Bay and Baker Lake, as well as to relevant federal and territorial government agencies, and Inuit organizations. The NIRB requested that interested parties review the proposal and provide the Board with any comments or concerns by July 4, 2011 regarding:

- Whether the project proposal is likely to arouse significant public concern; and if so, why;
- Whether the project proposal is likely to cause significant adverse eco-systemic and socio-economic effects; and if so, why;
- Whether the project is of a type where the potential adverse effects are highly predictable and mitigable with known technology, (providing any recommended mitigation measures); and
- Any matter of importance to the Party related to the project proposal.

On or before July 4, 2011 the NIRB received comments from the following interested parties (see Comments and Concerns section below):

- Kivalliq Inuit Association (KIA)
- Government of Nunavut – Executive & Intergovernmental Affairs (GN)
- Aboriginal Affairs and Northern Development Canada (AAND)
- Transport Canada (TC)
- Fisheries and Oceans Canada (DFO)
- Natural Resources Canada (NRCan)
- Environment Canada (EC)
- CLO of Chesterfield Inlet
- Lutsel K'e Dene First Nation (LKDFN)

## PROJECT ACTIVITIES

This proposed Meliadine Gold Mine development is located in the Kivalliq Region approximately 24 kilometres northwest of Rankin Inlet. AEM is proposing to develop and operate a medium to large gold mine and mill which would process up to 15,000 tonnes of ore per day. The mine would be expected to combine both open pit and underground mining techniques at six separate deposits: Tiriganiaq, F Zone, Wolf, Pump, Wesmeg and Discovery. AEM anticipates that construction would take approximately two (2) years, followed by ten (10) years of mine operations and a period of three (3) years for reclamation and monitoring.

The following is a *summary* of the main project activities and components associated with the Meliadine Gold Project Proposal:

- Open pit mining and underground mining at Tiriganiaq, F zone, Discovery, Wesmeg, Wolf and Pump deposits;
- Diking and dewatering of lakes at Tiriganiaq and F zone deposits;
- Expansion of existing infrastructure at Tiriganiaq site from the underground exploration and bulk sampling program;
- Utilization of clean waste rock for the construction of haul roads, pads, berms, etc.;
- Construction of ore storage pads at satellite mines;
- Utilization of proposed all-weather road from Rankin Inlet to Meliadine area;
- Expansion of all-weather road to satellite mines;
- Transportation of ore from satellite mines to Tiriganiaq for processing;
- Construction of a mill facility at Tiriganiaq;
- On site processing of ore at up to 15,000 tonnes per day;
- Construction of tailings management facilities;
- Construction of bulk fuel storage facilities at Tiriganiaq and Rankin Inlet;
- Construction of tankfarms at F zone and Discovery;
- Transportation, storage and on-site manufacture of explosives;
- Transportation and storage of chemicals and hazardous materials;
- Construction of fresh water treatment (and storage), wastewater treatment and sewage treatment facilities;
- Withdrawal of freshwater from Meliadine Lake and other unnamed lakes;
- Discharge of treated effluent into the receiving environment;
- Construction of an accommodations complex for up to 650 beds;
- Potential expansion of existing camp facilities to accommodate up to 250 personnel and construction of an additional temporary camp to support construction activities;
- Construction of additional site infrastructure to support the mine, including warehouses, maintenance shops, administration complexes and offices, dry facilities, laydown areas, and a mixing plant for cement slurry and/or cement paste;
- Construction of support facilities at Rankin Inlet including wharf, storage facility and laydown area;
- Construction of a power plant at the Meliadine site or a power plant at Rankin Inlet with transmission lines extending to the Meliadine site;
- Marine shipment of reagents, fuel and supplies to a storage facility at Rankin Inlet and transfer via all-weather road to the Tiriganiaq site;

- Construction of solid waste management and incineration of domestic wastes; and
- Decommissioning and reclamation activities.

The NIRB has previously screened surface exploration activities (NIRB File No. 08EN043), underground exploration and bulk sampling (NIRB File No. 07EN044 and 10EA018) and an all-weather road proposal (11RN017) related to the Meliadine Gold property operated by AEM. All documents submitted in support of the current application, in addition to information pertaining to previous screenings for the Meliadine site, can be obtained from the NIRB's online public registry at the following link:

<http://ftp.nirb.ca/01-SCREENINGS/COMPLETED%20SCREENINGS/>

#### COMMENTS AND CONCERNS

Most of the comments received from Parties indicate that, due to the nature and scale of the proposed activities and components, the proposed project may cause significant adverse effects on the ecosystem and wildlife habitat, and there may be significant adverse socio-economic effects on northerners.

Full comment submissions can be obtained from the NIRB's online public registry at the following link: <http://ftp.nirb.ca/01-SCREENINGS/COMPLETED%20SCREENINGS/>

The following is a *summary* of the comments and concerns received during the public comment period for this file:

#### **Kivalliq Inuit Association (KIA):**

- Is of the opinion that the project may have potential adverse effects on the environment and the socio-economics of the local communities
- Believes concerns can be adequately addressed and mitigated in a timely fashion through the existing Nunavut wide regulatory review process.
- General comments in regards to the Project Description
  - Approximate locations of waste rock piles and stocked overburden should be identified on one large site plan
  - Approximate size and height on the horizon on waste rock piles and all associated infrastructure should be mentioned
  - Figures should be consistent and reference all deposits and major earthwork components
  - Should include a figure to compare approximate mine site infrastructure in relation to nearest affected community known features (i.e., approximate pit size in relation to Nipisar Lake/town/airstrip)
  - Several archaeological and cultural features have been identified around the project area. A coordinated approach with the Government of Nunavut is encouraged
  - Impacts of fugitive dust around the mine site, community marshalling area and access roads need to be thoroughly addressed

**Government of Nunavut –Executive & Intergovernmental Affairs (GN):**

- Believes the components [the Meliadine Gold Mine project] could have substantial environmental and socio-economic impacts, both locally and regionally, and should be given thorough consideration by [the] NIRB, the public, and government.
- Recommends that the NIRB issue a decision consistent with the NLCA 12.4.4(b), specifically Part 5, Article 12 of the NLCA

**Aboriginal Affairs and Northern Development Canada (AAND):**

- Is of the opinion that due to the nature and scale of the proposed project activities and components having potential to cause significant environmental impacts and socio-economic effects on northerners, a review is required.
- Have conducted a preliminary assessment of the proposal and identified areas that merit more in-depth assessment:
  - The anticipated impacts of construction, operation and closure activities on wildlife, water quality and quantity, vegetation, landforms and permafrost features in the area
  - The anticipated socio-economic impacts throughout the project
  - The impacts of potential accidents or malfunctions on site as well as during transportation
  - Shared Itivia Harbour area with the community of Rankin Inlet
  - The potential for ongoing and incremental land use activities associated with this and other mining and transportation activity in the Kivalliq region to result in cumulative ecosystemic and socio-economic impacts.
  - Public access road, including enforcement controls

**Transport Canada (TC):**

- Upon initial review transport Canada has identified an interest in a number of activities within the proposed project and provided the following comment
  - For all work(s) (dikes, water-intakes, wharfs, and crossing structures) to be built or placed in, on, over, under, through, or across any navigable water, the proponent will need to submit formal applications to the Navigable Water Protection Program (NWPP) in order to obtain NWPP's approval, promulgation, or exemption for each specific work. The proponent shall also inform the NWPP of any design, construction, or operational changes accordingly. If the proponent is uncertain of the NWPP's requirements as they pertain to an application for a specific work, please refer to the NWPP internet site or contact the NWPP office.

**Fisheries and Oceans Canada (DFO):**

- Is of the opinion that there is potential for the Meliadine Mine development to cause significant adverse environmental impacts to fish and fish habitat and suggests that the Meliadine Gold Mine project be reviewed under Article 12, Part 5 or 6 of the NLCA.

**Natural Resources Canada (NRCan):**

- As the proponent has indicated explosives will be transported, stored, manufactured and used on-site in its submitted application, the proposed storage and manufacture of explosives is within NRCan's regulatory mandate under the Explosives Act.
- Previous mining proposals in Nunavut have been referred to Part 5 reviews under article 12 of the NLCA. Given the scale of this proposal, a Review of the project proposal is expected to provide a comprehensive assessment of the project and its potential impacts.

**Environment Canada (EC):**

- Is of the opinion that the proposed project may cause significant adverse effects on the ecosystem and wildlife habitat
- Is of the opinion that at a minimum a Part 5 review under Section 12.4.4(b) of the NLCA would be appropriate.
- Would also like to reiterate comments made on May 6, 2011 regarding the Part 4 Screening for AEM's "All-weather Road" project proposal: "EC encourages NIRB to consider the direct and cumulative regional impacts of the project taking into consideration the incremental increases in the activities currently being carried out as well as other activities that are reasonably foreseeable. In principle, and in keeping with EA best practice, EC is of the position that reviewing this project separately will make it more difficult to develop a comprehensive understanding of the project's overall effects. Accordingly, future review of any related development proposal would need to fully consider the use and operation of the road within the scope of any new assessment."
- With the above in mind and anticipating this mining proposal will receive a Part 5 review at minimum; EC will be recommending that the all-weather road be scoped into the current project review.

**CLO of Chesterfield Inlet:**

- Has questions regarding:
  - Is the area a migration area for the caribou that cross to Chesterfield Inlet area or will it effect the migration of the caribou to the upper part of the Inlet?
  - If there are caribou around Meliadine site, will the Inuit be able to hunt around that area to harvest?

**Lutsel K'e Dene First Nation (LKDFN):**

- Mining of this area will have an impact and adversely affect our traditional way of life
- The caribou population will be impacted and will be caused harm. While the caribou is an important subject, how will the legal requirements of the "duty to consult" be met?
- Believes in gaining a better perspective on the various issues associated with the development because we have rights to continue our traditional ways of life which include hunting, fishing and trapping without any interference and our people will be here long after the mining industry is done extracting all the resources from our traditional territories
- Believes that the Guidelines for Mineral Exploration in the Akaitcho Territory should be understood since this development could pose possible impacts to this area.

In determining whether or not a public review is necessary, the NIRB considered a number of factors, in addition to soliciting and reviewing comments received from responsible government departments, Inuit organizations and interested parties. Upon completion of the Board's technical review, and consistent with the criteria stated in 12.4.2 (a) of the NLCA, the NIRB determined that the size and nature of the Meliadine Gold Mine project indicate that:

1. The project may have significant adverse effects on the ecosystem, wildlife habitat or Inuit harvesting activities;
2. The project may have significant adverse socio-economic effects on Northerners; and
3. The project will cause significant public concern

1. The project may have significant adverse effects on the ecosystem - 12.4.2 (a) (i):

The NIRB and other commenting parties have identified a number of potential significant adverse effects that could be associated with this project. In particular, the potential for impacts to surface and groundwater quality from the proposed works will require special attention. Selections of those comments identifying potential adverse effects are listed below:

AEM is proposing to develop and operate a medium to large gold mine and mill. The mine would be expected to combine both open pit and underground mining techniques. The GN believes these components could have substantial environmental and socio-economic impacts, both locally and regionally, and should be given thorough consideration by NIRB, the public, and government. (*Government of Nunavut*)

[Environment Canada] is of the opinion that there is potential for this project to cause significant adverse environmental impacts. Potentially impacted ecosystem components include, but may not be limited to:

- Surface freshwater as a result of the deposit of treated effluent into a lake, nutrient input from blasting and sewage treatment, suspended sediments as a result of construction activities, surface runoff from ore and waste rock, and accidents and malfunction;
- Air quality as a result of the operation of the incinerator, mine site activities and the equipment and supplies along the all-weather road;
- Migratory birds as a result of habitat loss and disturbances at the proposed site facilities and roads; and,
- Species at risk as a result of habitat loss and disturbance at proposed site facilities and roads. (*Environment Canada*)

After reviewing the scope of information that has been presented by the proponent to date, including mitigation measures and best management practices, DFO is of the opinion that there is potential for the Meliadine Mine development to cause significant adverse environmental impacts to fish and fish habitat. (*Fisheries and Oceans Canada*)

2. The project may have significant adverse socio-economic effects on Northerners - 12.4.2 (a) (ii):

The NIRB and other commenting parties, including the proponent, have identified both positive and negative socio-economic effects that could be caused by this project. Given the close proximity of the project to the community of Rankin Inlet, as well as AEM's intention to locate certain support infrastructure and materials within the community, there are a number of important socio-economic impacts that require thorough assessment. Selections of those comments raising several major issues are shown below:

The combination of the Project going ahead and the use of the hamlet's infrastructure, labour force and businesses will have a profound socioeconomic impact on Rankin Inlet and, to a lesser extent, on other Kivalliq communities. (*Agnico-Eagle Mines Ltd.*)

The Meliadine Gold project has substantial potential to contribute to the economic well-being of the territory while respecting the traditional well-being of Inuit. (*Kivalliq Inuit Association*)

3. The project will cause significant public concern - 12.4.2 (a) (iii):

After soliciting comments from the public and interested parties, and completing an internal technical review, it is the NIRB's finding that the size and nature of the Meliadine Gold Mine project will also cause significant public concern, best addressed through the course of a public review pursuant to Part 5 or 6 of NLCA Article 12. A number of parties, including the proponent, have also recommended to the NIRB that the Meliadine Gold Mine Project be subject to review, with several parties indicating their preference specifically for a Part 5 review:

Due to the size and nature of the proposed Project and the necessary scrutiny that such projects require, AEM believes that a Part 5 review, as referenced in Article 12 of the Nunavut Land Claims Agreement, is required and requests the Nunavut Impact Review Board undertake such a review of the Meliadine Project. (*Agnico-Eagle Mines Ltd.*)

The GN recommends that NIRB issue a decision consistent with the NLCA 12.4.4 (b). Furthermore, as has been the case with other mining projects reviewed by NIRB in recent years, the GN believes that most of the environmental and socio-economic impacts will be felt within the Nunavut Settlement Area and therefore recommends that the project proceed to a review as set out under Part 5, Article 12 of the *Nunavut Land Claims Agreement*. (*Government of Nunavut*)

AAND has reviewed the project proposal and is of the opinion that due to the nature and scale of the proposed projects activities and components having potential to cause significant environmental impacts and socio-economic effects on northerners, a review is required under 12.4.2 of the Nunavut Land Claims Agreement. (*Aboriginal Affairs and Northern Development Canada*)



DFO suggests that the Meliadine Gold Mine project be reviewed under Article 12, Part 5 or 6 of the *Nunavut Land Claim Agreement*. (*Fisheries and Oceans Canada*)

Previous mining proposals in Nunavut have been referred to Part 5 reviews under Article 12 of the NLCA. Given the scale of this proposal, a Review of the project proposal is expected to provide a comprehensive assessment of the project and its potential impacts. (*Natural Resources Canada*)

Due to the potentially significant adverse impacts to these ecosystem components resulting from the project, it is EC's opinion that at a minimum a Part 5 Review under Section 12.4.4(b) of the Nunavut Land Claim Agreement would be appropriate. (*Environment Canada*)

Following the NIRB technical review of the project proposal and considerations for the potential impacts associated with this type of project development (gold mining and milling) and associated infrastructure, as well as the public concerns expressed, there are a number of issues which require further attention and clarification by the proponent in order to ensure a thorough environmental impact assessment. The NIRB believes this would best be done through the public review process pursuant to Part 5 or 6 of NLCA Article 12.

#### ADDITIONAL ISSUES OF CONCERN TO NIRB

In addition to the potential ecosystemic and socioeconomic impacts which the NIRB must consider pursuant to NLCA Section 12.4.2, the Board has identified a number of important issues which a review of the Meliadine Gold Project should also take into consideration:

##### **1. AEM's "All-Weather Road" project proposal**

Following the NIRB's recent screening of AEM's "All-Weather Road" project proposal (NIRB File No. 11RN017), on July 4, 2011 the Board recommended to the Minister of AAND that this project proposal be returned for clarification pursuant to Section 12.4.4(c) of the NLCA. Furthermore, the Board recommended that construction of the all-weather road would more appropriately be considered within the context of the Meliadine Gold mining and milling development project proposal.

As the Board is now indicating that a review under Part 5 or 6 of Article 12 of the NLCA is required for the Meliadine Gold Project, the NIRB is further recommending that the scope of this review include the activities associated with the construction and operation of the Meliadine all-weather road proposal. If the Minister refers the Meliadine Gold Mine to review and AEM chooses to re-apply for early development of the all-weather road, an application with sufficient evidence to support the request could allow the NIRB to give consideration of all-weather road construction as a pre-development activity pursuant to NLCA Section 12.10.2. Prior to making such an important decision, the NIRB would actively consult parties and, if necessary, add the request to the list of items canvassed at any Pre-Hearing Conference for the review of the Meliadine Gold Mine.

In its comments to the NIRB regarding the Meliadine Gold Mine, AAND has also identified concerns with the public access road, including enforcement controls and the impacts of potential accidents or malfunctions on-site as well as during transportation. Finally, the NIRB notes that broadening the scope of the assessment for the Meliadine Gold Mine is also supported by Environment Canada's comment submission during the screening of this file:

With this in mind, and anticipating this mining proposal will receive a Part 5 Review at a minimum, EC will be recommending the all-weather road be scoped in to the current project review. (*Environment Canada*)

## **2. Potential Cumulative Effects of Increasing Mineral Development in the Kivalliq Region**

The Meliadine Gold Mine is the second new mining and milling development currently proposed for the Kivalliq Region, in addition to one currently operating mining and milling development. The NIRB is aware of a growing number of mineral exploration and development projects currently operating or under review by the Board throughout the Kivalliq Region, including:

- AEM's Meadowbank Gold Mine, currently being monitored by the Board, NIRB File No. 03MN107);
- AREVA Resources Canada Inc.'s Kiggavik Uranium Mine proposal, currently under review by the Board (NIRB File 09MN003);
- AEM's Meliadine surface exploration, underground and bulk sampling program, previously screened by the Board (NIRB File No. 08EN043, 07EN044 and 10EA018)

Given the relatively small combined population<sup>1</sup> of the seven Kivalliq communities and the importance of the caribou calving and post-calving areas located in the region, it is the view of the NIRB staff that the potential cumulative ecosystemic and socio-economic effects must factor prominently into the assessment of the Meliadine Gold Mine as a proposed new development in this region. In its submission to the NIRB, AAND identified the following as an area meriting more in depth assessment:

The potential for ongoing and incremental land use activities associated with this and other mining and transportation activity in the Kivalliq region to result in cumulative ecosystemic and socio-economic impacts. (*Aboriginal Affairs and Northern Development Canada*)

## **3. Level of Information Currently Available In Support of the Project Proposal**

The NIRB and several parties have noted that the level of information that has been provided by AEM within the current project description for the Meliadine Gold Mine project proposal is considerably less than what has been provided for similar mining and milling proposals previously submitted to the NIRB for consideration. While enough information has been provided to confidently determine that a review is required to adequately assess the proposal, in comment submissions to the Board several parties have identified areas lacking in information.

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<sup>1</sup> The 2010 population estimate for the Kivalliq region was 9,479 people (Nunavut Bureau of Statistics)

It is the Board's expectation that some of these areas will be addressed in the feasibility studies currently being completed by AEM, including details related to mine infrastructure locations and maps, public access road plans and archaeological and cultural feature plans to be developed with the Government of Nunavut – Department of Culture, Language, Elders and Youth.

AEM has indicated that it is conducting feasibility studies which include (but are not limited to): an evaluation of the site's optimal production rate; how deposits will be developed (open pit or underground or combination); where project infrastructure (i.e., power generators, processing facilities, fuel storage, etc.) would be located both on site and in Rankin Inlet; how spur roads would be routed; how final tailings would be produced (conventional slurry, past or solid) as well as the design of the tailings impoundment area. While the NIRB recognizes that the design and plans for the proposed development will continue to evolve through the environmental impact assessment process, it is noted that AEM will likely be required to provide additional information in support of the proposal prior to the NIRB conducting community scoping sessions should a review be directed by the Minister.

#### **4. Availability of Participant Funding**

It is the NIRB's opinion that given the range and scope of the potential impacts of the project, participant funding will likely be required to facilitate meaningful participation by potentially affected groups. Accordingly, the NIRB requests that the Minister consider this matter in his decision-making. Incidentally, there is a precedent for the award of this type of funding in the majority of NIRB's current Part 5 reviews.

## RECOMMENDATION TO THE MINISTER

Collectively, the Board has carefully considered the factors set out in sections 12.4.2 (a) and 12.4.2 (b) of the NLCA. The Board has no doubt, based on the submissions of the Parties as set out in the preceding sections of this Screening Decision, that this Project may have significant adverse effects on the ecosystem, wildlife habitat or Inuit harvesting activities; adverse socio-economic effects on northerners; and will cause significant public concern.

**Therefore, pursuant to Section 12.4.4 (b) of the NLCA, the Board recommends to the Minister that Agnico-Eagle Mines Ltd.'s Meliadine Gold Mine project proposal requires review under Part 5 or 6 of NLCA Article 12.**

The NIRB looks forward to receiving your decision and will act quickly to address the next steps in any subsequent review of the Meliadine Gold Mine project proposal.

Yours truly,



Lucassie Arragutainaq  
Chairperson

cc: Honourable Denis Lebel, Government of Canada, Minister of Transport, Infrastructure and Communities  
Honourable Keith Ashfield, Government of Canada, Minister of Fisheries and Oceans  
Honourable Peter Kent, Government of Canada, Minister of Environment  
Honourable Joe Oliver, Government of Canada, Minister of Natural Resources  
Honourable Lorne Kusugak, Government of Nunavut, Minister of Community and Government Services  
Thomas Kabloona, Chairperson, Nunavut Water Board  
Joe Kaludjak, President, Kivalliq Inuit Association